Amendments to the Specification:

Please replace the line beginning on page 6, line 20 with the following rewritten line:

FIG. 14 is a block diagram of a method for reducing the instructions to ~~dtect~~ detect a valid dual tone and for pre-detecting a dual tone;

Please replace the paragraph beginning on page 10, line 4 with the following rewritten paragraph:

The exemplary signal processing system can be implemented with a programmable DSP software architecture as shown in FIG. 2. This architecture has a DSP 17 with memory 18 at the core, a number of network channel interfaces 19 and telephony interfaces 20, and a host 21 that may reside in the DSP itself or on a separate microcontroller. The network channel interfaces 19 provide multi-channel access to the packet based network. The telephony interfaces ~~23~~ 20 can be connected to a circuit switched network interface such as a PSTN system, or directly to any telephony device. The programmable DSP is effectively hidden within the embedded communications software layer. The software layer binds all core DSP algorithms together, interfaces the DSP hardware to the host, and provides low level services such as the allocation of resources to allow higher level software programs to run.

Please replace the paragraph beginning on page 10, line 23 with the following rewritten paragraph:

The DSP server 25 includes a resource manager 24 which receives commands from, forwards events to, and exchanges data

with the user application layer 26. The user application layer 26 can either be resident on the DSP 17 or alternatively on the host 21 (see FIG. 2), such as a microcontroller. An application programming interface ~~27~~ 28 (API) provides a software interface between the user application layer 26 and the resource manager 24. The resource manager 24 manages the internal / external program and data memory of the DSP 17. In addition the resource manager dynamically allocates DSP resources, performs command routing as well as other general purpose functions.

Please replace the paragraph beginning on page 13, line 5 with the following rewritten paragraph:

In the fax relay mode 40, the resource manager invokes a fax exchange 52 service. The packet fax exchange 52 may employ various data pumps including, among others, V.17 which can operate up to 14,400 bits per second, V.29 which uses a 1700-Hz ~~carrer~~ carrier that is varied in both phase and amplitude, resulting in 16 combinations of 8 phases and 4 amplitudes which can operate up to 9600 bits per second, and V.27ter which can operate up to 4800 bits per second. Likewise, the resource manager invokes a packet data exchange 54 service in the data relay mode 42. The packet modem data exchange ~~52~~ 54 may employ various data pumps including, among others, V.22bis/V.22 with data rates up to 2400 bits per second, V.32bis/V.32 which enables full-duplex transmission at 14,400 bits per second, and V.34 which operates up to 33,600 bits per second. The ITU Recommendations setting forth the standards for the foregoing data pumps are incorporated herein by reference as if set forth in full.